REMARKS

Claims 7-16 are all the claims pending in the application. Reconsideration and allowance of all the claims are respectfully requested in view of the following remarks.

Drawings

The Examiner objected to the drawings, stating that Figures 10 and 11 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. Accordingly, Applicants have filed herewith proposed drawing corrections that label Figs. 10 and 11 as "Prior Art". See the attached drawing sheets, wherein the changes are shown in red ink.

Specification

The Examiner has objected to the title because the title of the invention is not descriptive, and indicates that a new title is required that clearly is indicative of the invention to which the claims are directed. In response, Applicants have amended the title in a manner believed to overcome the Examiner's objection.

The Examiner requested Applicants' cooperation in correcting any errors in the specification which Applicants are aware. Accordingly, Applicants have amended the specification so as to correct grammatical and typographical errors of which they are aware.

Claim Rejections - 35 U.S.C. § 112

The Examiner rejected claims 8-15 under 35 U.S.C. § 112, 2nd paragraph, as being indefinite.

Specifically, the Examiner noted that claims 8-15 depend from canceled claims 1 and 2. Accordingly, Applicants have amended claims 8-15 to be appropriately dependent on either claim 7 or 8.

Further, the Examiner notes that there is no antecedent basis for "the sides of the magnetic portions" as set forth in claim 9. Therefore, Applicants have amended claim 9 so as to recite "sides of the magnetic portions" for the first time.

Claim Rejections - 35 U.S.C. § 103

- The Examiner rejected claims 7, 9 and 10 under § 103(a) as being unpatentable over JP 54116610 to Tajima et al. (hereinafter "Tajima") and US Patent 5,325,003 to Saval et al. (hereinafter "Saval"). Applicants respectfully traverse this rejection because the references fail to establish *prima facie* obviousness in that they do not teach or suggest each and every element as set forth in the claims.

Claim 7 sets forth a rotor of a dynamo-electric machine that includes, *inter alia*, a plurality of magnetic portions provided between adjacent ones of triangular magnetic poles of a field core assembly. That is, for example, the present invention includes a plurality of discrete hexahedral magnetic portions 38.

In contrast to that set forth in claim 7, Tajima discloses a thermosetting adhesive 15 that includes ferrite powder, wherein the adhesive 15 is continuously disposed in the spaces 13, 14 between the hook-shaped poles 4. See Fig. 3. That is, the adhesive 15 is a unitary member of one piece and, therefore, is not a "plurality of magnetic portions".

The Examiner cites Saval as teaching a bobbin with opposing flanges. However, Saval does not teach or suggest a plurality of magnetic portions. Saval does not disclose the use of magnetic portions between the pole pieces 24, 26 at all. Further, like Tajima, Saval teaches the use of a unitary molded insert 22 made of insulating plastic that fills the region 122 between pole pieces 24, 26.

Therefore, *arguendo*, even if one of ordinary skill in the art were to combine Tajima and Saval as suggested by the Examiner, any such combination would still not render Applicants' claim 7 obvious. Accordingly, dependent claims 9 and 10 are likewise not rendered obvious by Tajima in view of Saval.

- The Examiner rejected claims 7-10 and 13-15 under § 103(a) as being unpatentable over JP 612-254,040 to Hotta et al. (hereinafter "Hotta '040") and JP 3-265,450 to Hotta (hereinafter "Hotta '450"). Applicants respectfully traverse this rejection because the references fail to establish *prima facie* obviousness in that they do not teach or suggest every element of the claims as set forth.

Claim 7 sets forth a rotor of a dynamo-electric machine including, *inter alia*, a plurality of magnetic portions that abut at least one of the first flange and the second flange in order to join the plurality of magnetic portions to the bobbin.

In contrast to that in claim 7, Hotta '450 does not teach or suggest providing magnetic portions that abut at least one of the first and second flanges of the bobbin in order to join the plurality of magnetic portions to the bobbin. Instead, Hotta '040 discloses spacers 30 which are disposed between the triangular magnetic portions 1-p and 1-p' opposite to each other. The spacers 30 are united with a bobbin 20. These spacers 30 are constituted by non-magnetic material and the purpose of the spacers 30 is to prevent centrifugal currents due to the fan effect of the sides of the triangular magnetic portions 1-p and 1-p' from occurring, and to prevent the bobbin 20 and the triangular magnetic portions 1-p, 1-p' from relative rotation. Hotta '040 does not disclose anything about the leakage of magnetic flux between the triangular magnetic poles 1-p, 1-p'.

Hotta '450 discloses a structure wherein the rotor of a dynamo-electric machine comprises a plurality of magnetic portions 41 which are provided between adjacent triangular magnetic poles 12, 22 in an orientation that reduces the leakage of magnetic flux between the triangular magnetic poles 12, 22. Further, Hotta '450 discloses a non-magnetic ring 31 that holds the magnetic portions 41 fast between the triangular magnetic poles 12, 22, covering the magnetic portions 41. But Hotta '450 does not disclose that the magnetic portions 41 abut at least one of a first flange and a second flange in order to join the plurality of magnetic portions to a bobbin.

Accordingly, even if one of ordinary skill in the art were to combine Hotta '040 with Hotta '450, no such combination would render obvious Applicants' claim 7. Likewise, dependent claims 8-10, and 13-15, are not rendered obvious by Hotta '040 in view of Hotta '450.

- The Examiner rejected claims 11, 12, and 16, under § 103(a) as being unpatentable over Hotta '040 and Hotta '450, and further view of UK Patent 2,074,795 to Burton (hereinafter "Burton"). Applicants respectfully traverse this rejection because the references fail to establish *prima facie* obviousness in that they do not teach or suggest every element of the claims as set forth.

As noted above, Hotta '040 and Hotta '450 do not teach or suggest a plurality of magnetic portions that abut at least one of the first flange and the second flange in order to join the plurality of magnetic portions to the bobbin. The Examiner cites Burton as teaching a magnetic material in motors is made from resin with iron filings. But Burton does not disclose a plurality of magnetic portions that abut at least one of the first flange and the second flange in order to join the plurality of magnetic portions to the bobbin. Therefore, *arguendo*, even if one of ordinary skill in the art were to combine Hotta '040 with Hotta '450 and Burton as suggested by the Examiner, any such combination would still not render obvious Applicants' claims.

- The Examiner rejected claim 11 under § 103(a) as being unpatentable over Tajima and Saval, in further view of Burton. Applicants respectfully traverse this rejection because the references fail to establish *prima facie* obviousness in that they do not teach or suggest every element of the claims as set forth.

As noted above, Tajima and Saval do not teach or suggest a plurality of magnetic portions provided between adjacent ones of triangular magnetic poles of a field core assembly. The Examiner cites Burton as teaching a magnetic material in motors is made from resin with iron filings. But Burton does not disclose a plurality of magnetic portions provided between adjacent ones of triangular magnetic poles of a field core assembly. Therefore, *arguendo*, even if one of ordinary skill in the art were to combine Tajima with Saval and Burton as suggested by the Examiner, any such combination would still not render obvious Applicants' claims.

- The Examiner rejected claim 13 under § 103(a) as being unpatentable over Tajima and Saval, in further view to US Patent 5,483,116 to Kusase et al. (hereinafter "Kusase"). Applicants respectfully traverse this rejection because the references fail to establish *prima facie* obviousness in that they do not teach or suggest every element of the claims as set forth.

As noted above, Tajima and Saval do not teach or suggest a plurality of magnetic portions provided between adjacent ones of triangular magnetic poles of a field core assembly. The Examiner cites Kusase as teaching a bobbin made of resin. But Kusase does not disclose a plurality of magnetic portions provided between adjacent ones of triangular magnetic poles of a field core assembly. Therefore, *arguendo*, even if one of ordinary skill in the art were to combine Tajima with Saval and Kusase as suggested by the Examiner, any such combination would still not render obvious Applicants' claims.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Applicants hereby petition for any extension of time which may be required to maintain the pendency of this case, and any required fee, except for the Issue Fee, for such extension is to be charged to Deposit Account No. 19-4880.

Respectfully submitted,

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APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE TITLE:

The title is changed as follows:

ROTOR FOR DYNAMO-ELECTRIC MACHINE [AND METHOD OF MANUFACTURING THE SAME]

IN THE SPECIFICATION:

The specification is changed as follows:

Page 1, delete the second paragraph and insert therefor

Fig. 10 is a sectional side elevation of a conventional vehicular AC generator; and Fig. 11 is a perspective view of a rotor shown in Fig. 10. The AC generator is quipped with: a case 3 comprised of a front bracket 1 and a rear bracket 2 made of aluminum; a shaft 6 which is provided in the case 3 and which has a pulley 4 fixed at one end thereof; a [Randell-type] Lundell-type rotor 7 secured to the shaft 6; fans 5 secured to both side surfaces of the rotor 7; a stator 8 secured to the inner wall surface of the case 3; a slip ring 9 which is secured to the other end of the shaft 6 and which supplies current to the rotor 7; a pair of brushes 10 in sliding contact with the slip ring 9; a brush holder 11 which holds the brushes 10; a rectifier 12 which is electrically connected to the stator 8 to rectify alternating current generated in the stator 8 to direct current; a heat sink 17 fitted on the brush holder 11; and a regulator 18 which is bonded to the heat sink 17 to adjust the magnitude of the AC voltage generated in the stator 8.

Page 7, delete the second paragraph and insert therefor

The aforesaid bobbin 32 and the magnetic portions 38 connected to the bobbin 32 are manufactured according to the following procedure. First, the first flange 34, the second flange 35, the cylindrical portion 36, rotation stoppers 37, and inter-magnetic-pole members to be disposed between the triangular magnetic poles are integrally formed by injection molding using a magnetic resin composed of a polyamide-based resin with ferrite-based iron fillings mixed therein. Then, a magnetic field is applied to only the inter-magnetic-pole members to magnetize

them so as to form the magnetic portions 38 composed of magnetic material. [A part] Apart from the magnetic portions [37] 38, the second flange 35, the cylindrical portion 36, and the rotation stoppers 37 constituting the bobbin 32 are not magnetized and have an insulating function.

IN THE CLAIMS:

Please amend the claims as follows:

8. (Amended) A rotor of a dynamo-electric machine as claimed in Claim [1] 7, wherein said plurality of magnetic portions comprise magnetic members made of a magnetic material, and covers covering said magnetic members, and wherein said covers and said bobbin are made of a same resin material.

9. (Amended) A rotor of a dynamo-electric machine as claimed in Claim [1] 7, wherein fitting portions are formed on [the] sides of said magnetic portions to prevent said magnetic portions from shifting radially outward, said fitting portions fitting against sides of said triangular magnetic poles.

10. (Amended) A rotor of a dynamo-electric machine as claimed in Claim [1] 7, wherein engaging portions are formed on ends of said magnetic portions and engage with ends of said triangular magnetic poles to prevent said magnetic portions from shifting axially.

11. (Amended) A rotor of a dynamo-electric machine as claimed in Claim [1] 7, wherein said plurality of magnetic portions are formed with a resin mixed with ferrite-based iron filings.

12. (Amended) A rotor of a dynamo-electric machine as claimed in Claim [2] 8, wherein said plurality of magnetic portions are formed with a resin mixed with ferrite-based iron filings.

13. (Amended) A rotor of a dynamo-electric machine as claimed in Claim [1] 7, wherein said bobbin is formed with a resin.

14. (Amended) A rotor of a dynamo-electric machine as claimed in Claim [2] 8, wherein said bobbin is formed with a resin.

15. (Amended) A rotor of a dynamo-electric machine as claimed in Claim [1] 7, wherein said plurality of magnetic portions and said bobbin are formed as a unitary structure by injection molding.